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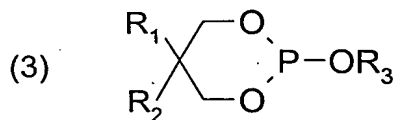
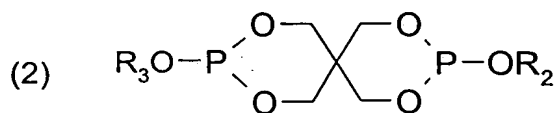
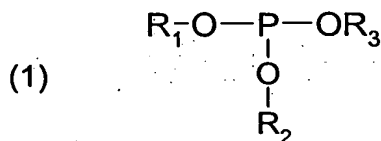
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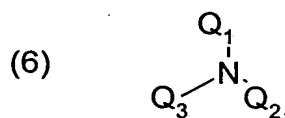
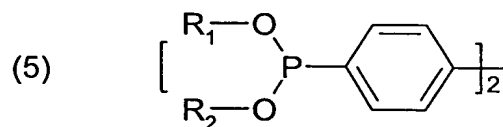
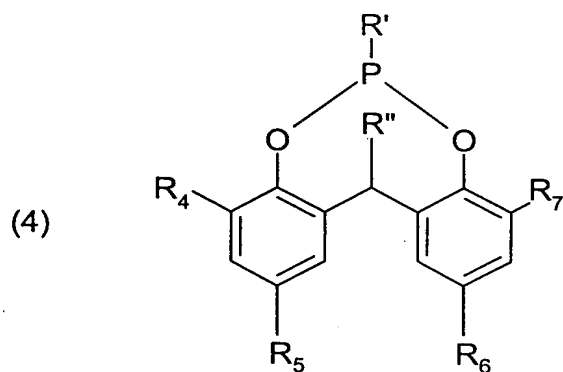
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# CLAIMS

We claim:

1. A polymer blend comprising a mixture of:
  - (A) at least one polyester prepared by the reaction of at least one diol with at least one dicarboxylic acid or dialkyl ester thereof in the presence of a metallic catalyst;
  - (B) at least one phosphite ester compound; and
  - (C) at least one hindered amine light stabilizer.
2. A polymer blend according to Claim 1 wherein the phosphite ester compound is selected from the formulas:





wherein

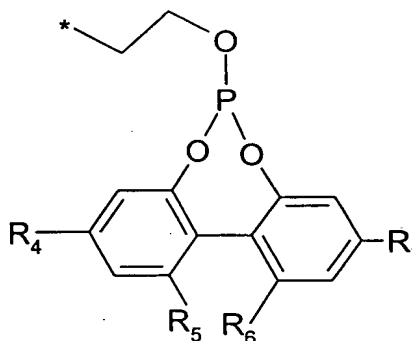
R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are independently selected from C<sub>1</sub>-C<sub>22</sub>-alkyl, substituted C<sub>1</sub>-C<sub>22</sub>-alkyl, C<sub>3</sub>-C<sub>8</sub>-cycloalkyl, substituted C<sub>3</sub>-C<sub>8</sub>-cycloalkyl, heteroaryl, and aryl;

R' is selected from halogen or OR<sub>1</sub>;

R'', R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, and R<sub>7</sub> are independently selected from hydrogen, C<sub>1</sub>-C<sub>22</sub>-alkyl, substituted C<sub>1</sub>-C<sub>22</sub>-alkyl, C<sub>3</sub>-C<sub>8</sub>-cycloalkyl, substituted C<sub>3</sub>-C<sub>8</sub>-cycloalkyl, heteroaryl, aryl;

each Q<sub>1</sub>, Q<sub>2</sub> and Q<sub>3</sub> group independently is radical A, wherein radical A has the following structure:

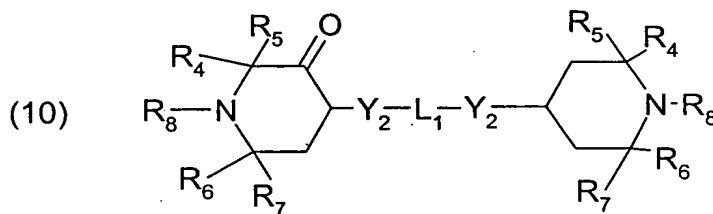
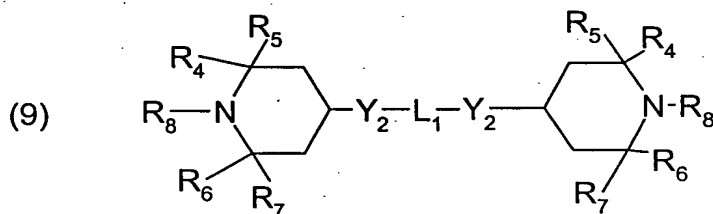
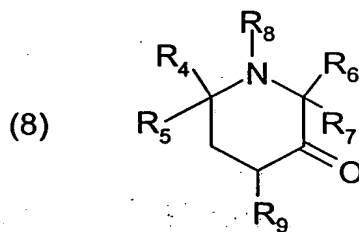
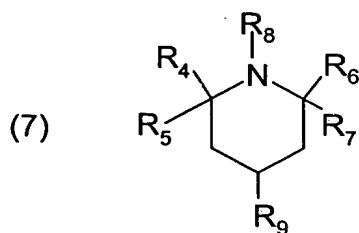
Radical A =

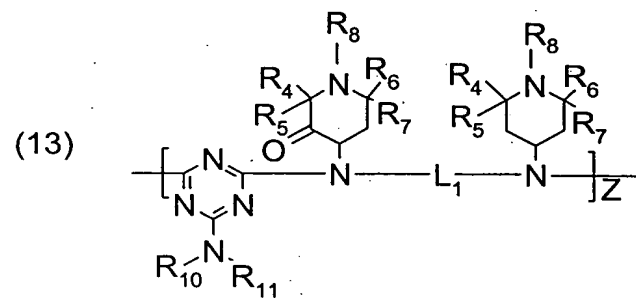
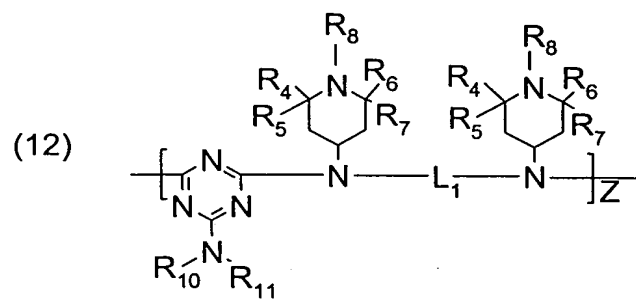
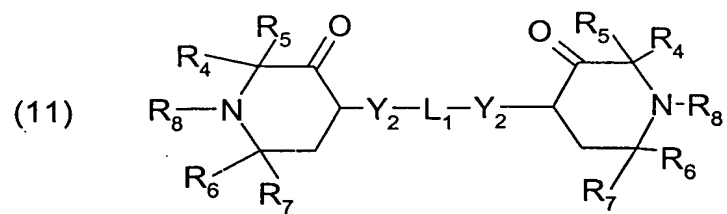


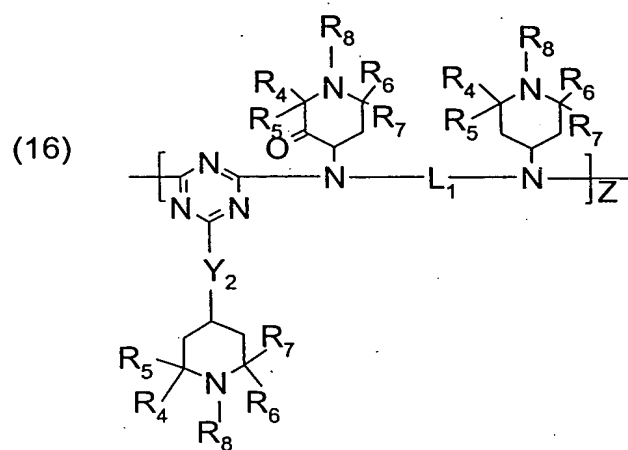
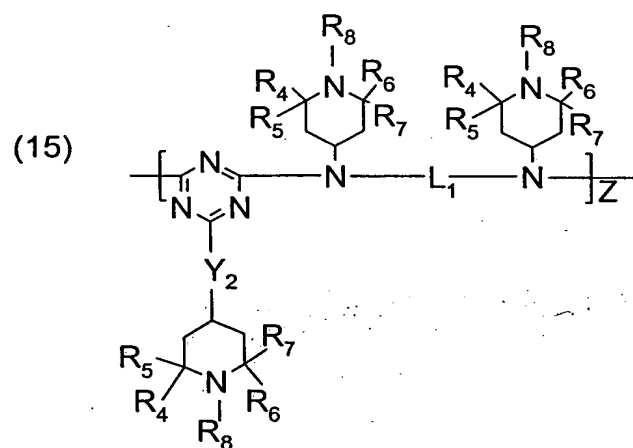
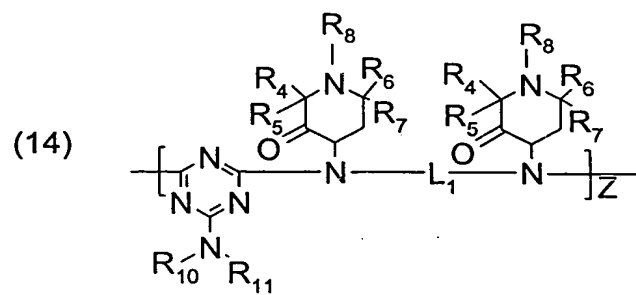
3. A polymer blend according to Claim 2 wherein the at least one comprises:
  - (1) diacid residues comprising at least 50 mole percent terephthalic acid residues, cyclohexanedicarboxylic acid residues or a mixture thereof; and
  - (2) diol residues comprising at least 50 mole percent of ethylene glycol residues, cyclohexanedimethanol residues, or a mixture thereof;
 wherein the total of the diacid residues is equal to 100 mole percent and the total of the diol residues also is equal to 100 mole percent.
  
4. A polymer blend according to Claim 3 wherein the polyester comprises up to about 200 ppmw Ti, Co and/or Mn residues.
  
5. A polymer blend comprising:
  - (A) at least one polyester comprising:
    - (1) diacid residues comprising at least 50 mole percent of residue of a diacid selected from 1,4-cyclohexanedicarboxylic acid, terephthalic acid and isophthalic acid or a mixture thereof; and
    - (2) diol residues comprising at least 50 mole percent of ethylene glycol residues, cyclohexanedimethanol residues, or a mixture thereof;
 based on a total of 100 mole percent of diacid residues and a total of 100 mole percent of diol residues;

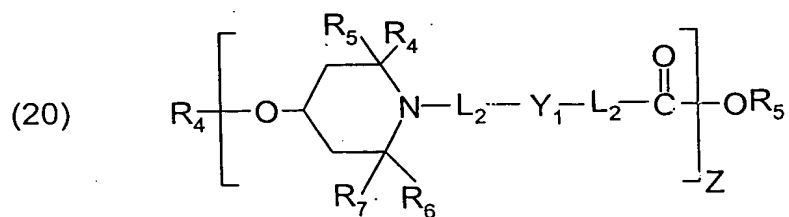
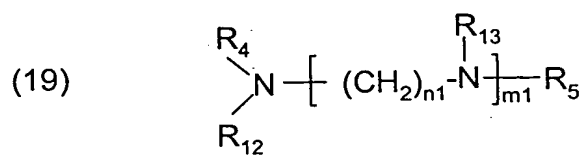
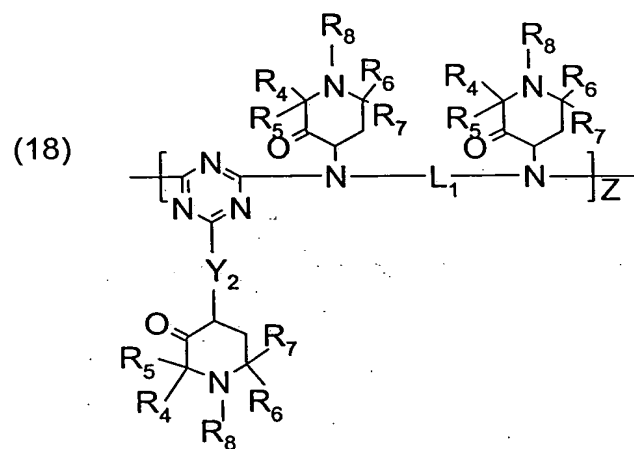
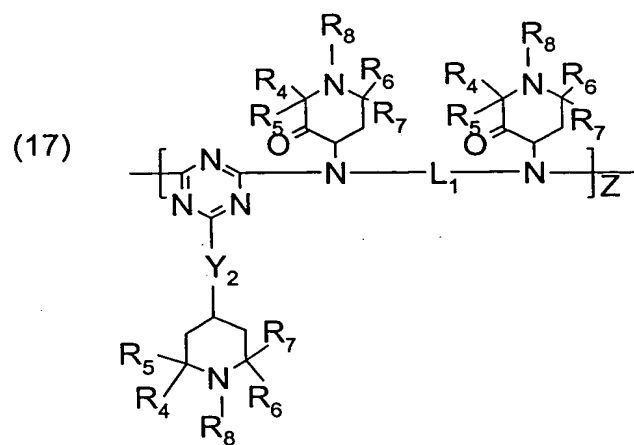
(B) 0.01 to 0.5 weight percent of at least one phosphite ester compound based on the total weight of the blend; and

(C) 0.01 to 1.0 weight percent of at least one hindered amine light stabilizer based on the total weight of the blend, wherein the at least one hindered amine light stabilizer is selected from the following formulae:











wherein

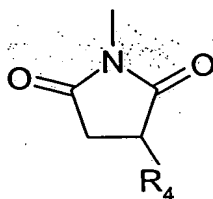
R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are independently selected from C<sub>1</sub>-C<sub>22</sub>-alkyl, substituted C<sub>1</sub>-C<sub>22</sub>-alkyl, C<sub>3</sub>-C<sub>8</sub>-cycloalkyl, substituted C<sub>3</sub>-C<sub>8</sub>-cycloalkyl, heteroaryl, and aryl;

R' is selected from halogen or OR<sub>1</sub>;

R'', R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, and R<sub>7</sub> are independently selected from hydrogen, C<sub>1</sub>-C<sub>22</sub>-alkyl, substituted C<sub>1</sub>-C<sub>22</sub>-alkyl, C<sub>3</sub>-C<sub>8</sub>-cycloalkyl, substituted C<sub>3</sub>-C<sub>8</sub>-cycloalkyl, heteroaryl, aryl;

R<sub>8</sub> is selected from hydrogen, -OR<sub>6</sub>, C<sub>1</sub>-C<sub>22</sub>-alkyl, substituted C<sub>1</sub>-C<sub>22</sub>-alkyl, C<sub>3</sub>-C<sub>8</sub>-cycloalkyl, substituted C<sub>3</sub>-C<sub>8</sub>-cycloalkyl;

R<sub>9</sub> is selected from hydrogen; C<sub>1</sub>-C<sub>22</sub>-alkyl, substituted C<sub>1</sub>-C<sub>22</sub>-alkyl, C<sub>3</sub>-C<sub>8</sub>-cycloalkyl, substituted C<sub>3</sub>-C<sub>8</sub>-cycloalkyl, heteroaryl, aryl, -Y<sub>1</sub>-R<sub>4</sub> or a succinimido group having the formula:



R<sub>10</sub> and R<sub>11</sub> are independently selected from hydrogen, C<sub>1</sub>-C<sub>22</sub>-alkyl, substituted C<sub>1</sub>-C<sub>22</sub>-alkyl, C<sub>3</sub>-C<sub>8</sub>-cycloalkyl, and substituted C<sub>3</sub>-C<sub>8</sub>-cycloalkyl;

R<sub>10</sub> and R<sub>11</sub> collectively may represent a divalent group forming a ring with the nitrogen atom to which they are attached, e.g., morpholino, piperidino and the like;

L<sub>1</sub> is a divalent linking group selected from C<sub>2</sub>-C<sub>22</sub>-alkylene; -(CH<sub>2</sub>CH<sub>2</sub>-Y<sub>1</sub>)<sub>1-3</sub>-CH<sub>2</sub>CH<sub>2</sub>-; C<sub>3</sub>-C<sub>8</sub>-cycloalkylene; arylene; or -CO-L<sub>2</sub>-OC-;

L<sub>2</sub> is selected from C<sub>1</sub>-C<sub>22</sub>-alkylene, arylene, -(CH<sub>2</sub>CH<sub>2</sub>-Y<sub>1</sub>)<sub>1-3</sub>-CH<sub>2</sub>CH<sub>2</sub>- and C<sub>3</sub>-C<sub>8</sub>-cycloalkylene;

Y<sub>1</sub> is selected from -OC(O)-, -NHC(O)-, -O-, -S-, -N(R<sub>4</sub>)-;

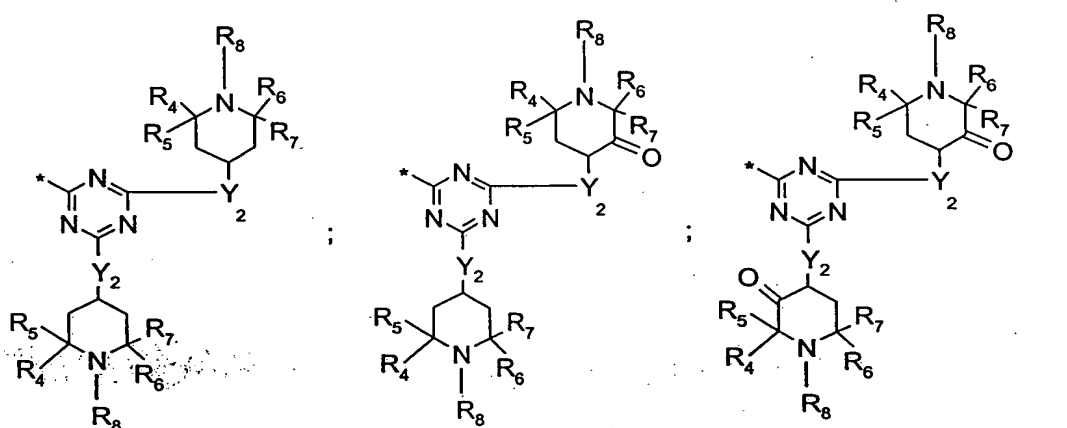
$Y_2$  is selected from -O- or -N(R<sub>4</sub>)-;

Z is a positive integer of up to about 20, preferably up to about 6;

m<sub>1</sub> is selected from 0 to about 10;

n<sub>1</sub> is a positive integer selected from 2 to about 12;

R<sub>12</sub>, and R<sub>13</sub> are independently selected from hydrogen, C<sub>1</sub>-C<sub>22</sub>-alkyl, substituted C<sub>1</sub>-C<sub>22</sub>-alkyl, heteroaryl, aryl and radical B wherein radical B is selected from the following structures:



Radical B structures wherein \* designate the position of attachment.

wherein at least one of R<sub>12</sub> and R<sub>13</sub> is radical B.

6. The polymer blend of Claim 5 wherein R<sub>8</sub> is hydrogen or alkyl.

7. The polymer blend of Claim 6 wherein the polyester of component (A) has an inherent viscosity of about 0.4 to 1.2 dL/g measured at 25°C in a 60/40 ratio by weight of phenol/tetrachloroethane and comprises:

(1) diacid residues comprising about 80 to 100 mole percent terephthalic acid residues and about 0 to 20 mole percent isophthalic acid residues; and

(2) diol residues comprising about 40 to 100 mole percent 1,4-cyclohexanedimethanol residues and 0 to about 60 mole percent ethylene glycol residues and component (B) 0.05 to 0.5 weight percent of at least one phosphite ester compound and (C) comprises 0.05 to 1.0 weight percent of at least one hindered amine light stabilizer based on the total weight of the composition.

8. The polymer blend of Claim 7 wherein the polyester of component (A) has an inherent viscosity of about 0.4 to 0.8 dL/g measured at 25°C in a 60/40 ratio by weight of phenol/tetrachloroethane and comprises:

- (1) diacid residues comprising about 80 to 100 mole percent terephthalic acid residues and about 0 to 20 mole percent isophthalic acid residues; and
- (2) diol residues comprising about 55 to 80 mole percent 1,4-cyclohexanedimethanol residues and about 20 to about 45 mole percent ethylene glycol residues.

9. A polymer blend of Claim 5 wherein the polyester of component (A) has an inherent viscosity of about 0.4 to 0.8 dL/g measured at 25°C in a 60/40 ratio by weight of phenol/tetrachloroethane and comprises:

- (1) diacid residues comprising about 65 to 83 mole percent terephthalic acid residues and about 35 to 17 mole percent isophthalic acid residues; and
- (2) diol residues comprising about 80 to 100 mole percent 1,4-cyclohexanedimethanol residues and about 0 to about 20 mole percent ethylene glycol residues.

10. The polymer blend of Claim 9 wherein the polyester of component (A) comprises:

- (1) diacid residues comprising about 70 to 80 mole percent terephthalic acid residues and about 30 to 20 mole percent isophthalic acid residues; and
- (2) diol residues comprising about 90 to 100 mole percent 1,4-cyclohexanedimethanol residues and 0 to about 10 mole percent ethylene glycol residues.

11. The polymer blend of Claim 5 wherein the polyester of component (A) has an inherent viscosity of about 0.4 to 1.2 dL/g measured at 25°C in a 60/40 ratio by weight of phenol/tetrachloroethane and comprises:

- (1) diacid residues comprising at least about 80 mole percent 1,4-cyclohexanedicarboxylic acid residues; and
- (2) diol residues comprising at least about 80 mole percent 1,4-cyclohexanedimethanol residues.

12. The polymer blend of Claim 11 wherein the polyester of component (A) comprises:

- (1) diacid residues comprising about 90 to 100 mole percent 1,4-cyclohexanedicarboxylic acid residues;
- (2) diol residues comprising about 90 to 100 mole percent 1,4-cyclohexanedimethanol residues.

13. The polymer blend of Claim 12 wherein the polyester of component (A) comprises:

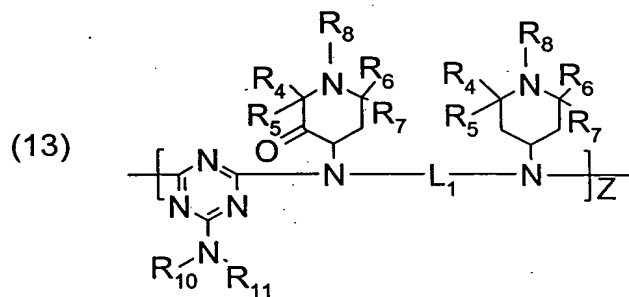
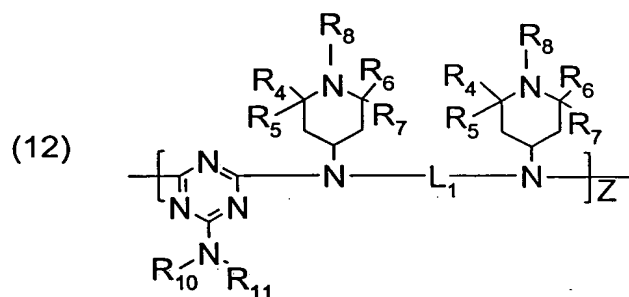
- (1) diacid residues comprising about 100 mole percent 1,4-cyclohexanedicarboxylic acid residues;
- (2) diol residues comprising about 100 mole percent 1,4-cyclohexanedimethanol residues.

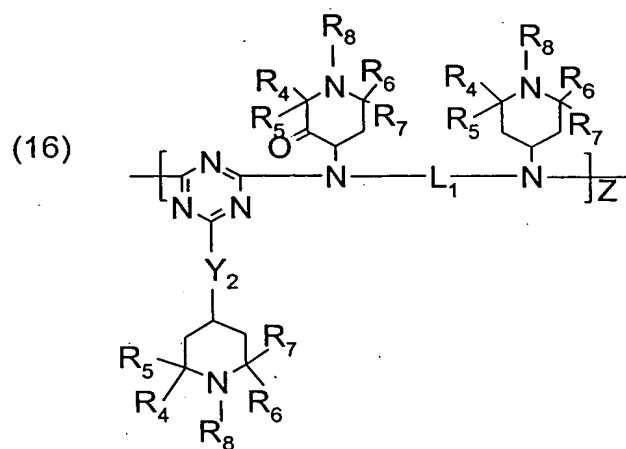
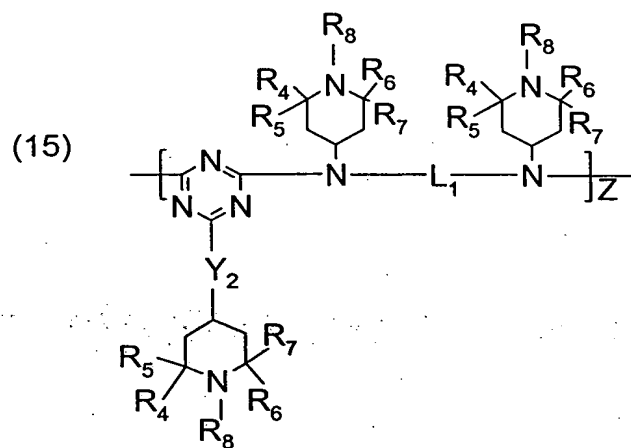
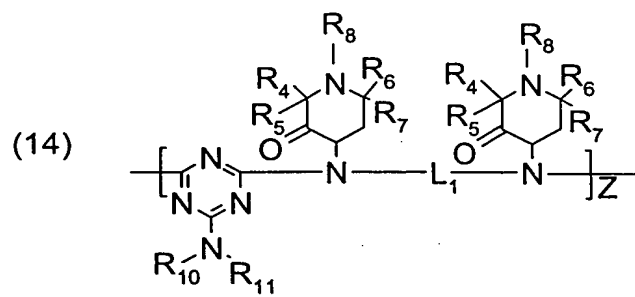
14. A polymer blend comprising a mixture of the following:

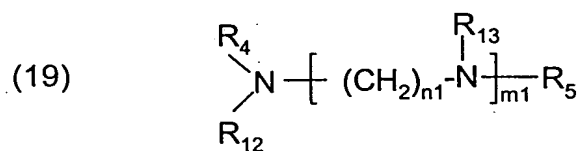
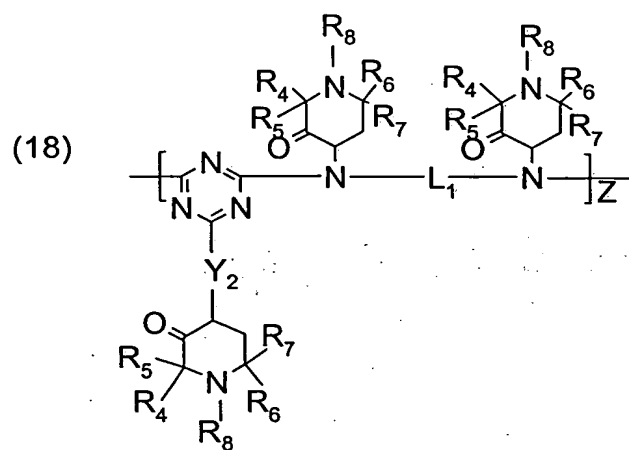
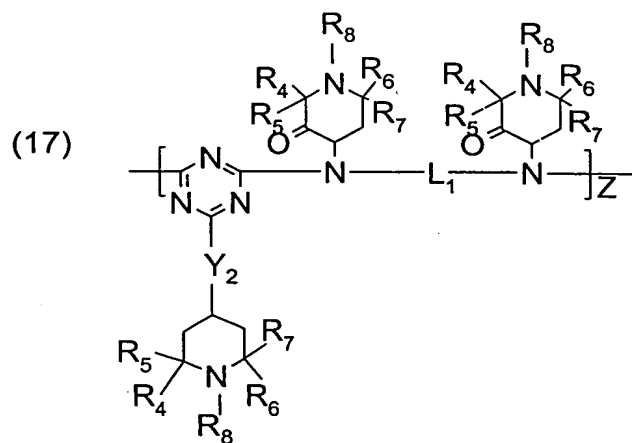
(A) at least one polyester having an inherent viscosity of about 0.4 to 1.2 dL/g measured at 25°C in a 60/40 ratio by weight of phenol/tetrachloroethane and comprises:

- (1) diacid residues comprising at least about 50 mole percent of residue of a diacid selected from 1,4-cyclohexanedicarboxylic acid, terephthalic acid and isophthalic acid or a mixture thereof; and

- (2) diol residues comprising at least about 50 mole percent ethylene glycol, cyclohexanedimethanol residues, or a mixture thereof;
- (B) about 0.1 to 0.5 weight percent of at least one phosphite ester compound based on the total weight of the composition; and
- C) about 0.1 to 1.0 weight percent of at least one hindered amine light stabilizer based on the total weight of the composition having the formulas:







wherein

$R_4$ ,  $R_5$ ,  $R_6$ , and  $R_7$  are independently selected from hydrogen,  $C_1$ - $C_{22}$ -alkyl, substituted  $C_1$ - $C_{22}$ -alkyl,  $C_3$ - $C_8$ -cycloalkyl, substituted  $C_3$ - $C_8$ -cycloalkyl, heteroaryl, aryl;

$R_8$  is selected from hydrogen,  $-OR_6$ ,  $C_1-C_{22}$ -alkyl, substituted  $C_1-C_{22}$ -alkyl,  $C_3-C_8$ -cycloalkyl, substituted  $C_3-C_8$ -cycloalkyl;

$R_{10}$  and  $R_{11}$  are independently selected from hydrogen,  $C_1-C_{22}$ -alkyl, substituted  $C_1-C_{22}$ -alkyl,  $C_3-C_8$ -cycloalkyl, and substituted  $C_3-C_8$ -cycloalkyl;

$R_{10}$  and  $R_{11}$  collectively may represent a divalent group forming a ring with the nitrogen atom to which they are attached;

$L_1$  is a divalent linking group selected from  $C_2-C_{22}$ -alkylene;  $-(CH_2CH_2-Y_1)_{1-3}-CH_2CH_2-$ ;  $C_3-C_8$ -cycloalkylene; arylene; or  $-CO-L_2-OC-$ ;

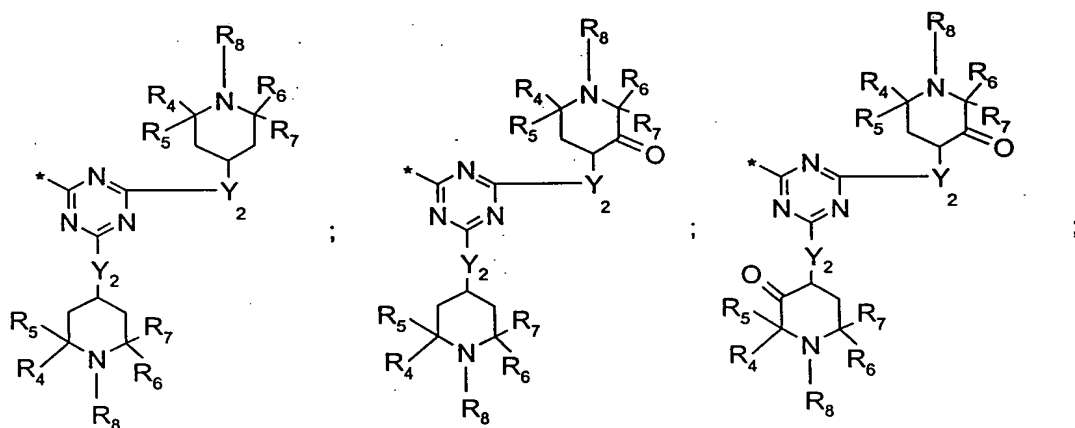
$Y_2$  is selected from  $-O-$  or  $-N(R_4)-$ ;

$Z$  is a positive integer of up to about 20, preferably up to about 6;

$m_1$  is selected from 0 to about 10;

$n_1$  is a positive integer selected from 2 to about 12;

$R_{12}$ , and  $R_{13}$  are independently selected from hydrogen,  $C_1-C_{22}$ -alkyl, substituted  $C_1-C_{22}$ -alkyl, heteroaryl, aryl and radical B wherein radical B is selected from the following structures:



Radical B structures wherein \* designate the position of attachment.

wherein at least one of  $R_{12}$  and  $R_{13}$  is radical B.



15. The polymer blend of Claim 14 wherein  $R_8$  is hydrogen or alkyl for the hindered amine light stabilizer.
16. The polymer blend of Claim 14 wherein the at least one hindered amine light stabilizer contains an  $sp^3$ -hybridized nitrogen atom that is not contained within the substituted piperidine ring.
17. The polymer blend of Claim 14 wherein the at least one hindered amine light stabilizer has a weight average molecular weight of greater than 1000.
18. The polymer blend of Claim 14 wherein the phosphite is selected from the group consisting of bis(2,4-di-*t*-butylphenyl)pentaerythritol diphosphite, distearyl pentaerythritol diphosphite, and bis-(2,4-dicumylphenyl) pentaerythritol diphosphite.
19. The polymer blend of Claim 18 wherein said phosphite ester compound is distearyl pentaerythritol diphosphite.
20. The polymer blend of Claim 18 comprising from about 0.15 to 0.35 weight percent of the phosphite ester compounds and from 0.1 to about 0.75 weight percent of the hindered amine light stabilizer, based on the total weight of the polymer blend.
21. The polymer blend of Claim 14 wherein the polyester of component (A) has an inherent viscosity of about 0.4 to 0.8 dL/g measured at 25°C in a 60/40 ratio by weight of phenol/tetrachloroethane and comprises:
  - (1) diacid residues comprising about 80 to 100 mole percent terephthalic acid residues and about 0 to 20 mole percent isophthalic acid residues; and
  - (2) diol residues comprising about 40 to 100 mole percent 1,4-cyclohexane-dimethanol residues and about 0 to about 60 mole percent ethylene glycol residues.

22. The polymer blend of Claim 14 wherein the polyester of component (A) has an inherent viscosity of about 0.4 to 0.8 dL/g measured at 25°C in a 60/40 ratio by weight of phenol/tetrachloroethane and comprises:

- (1) diacid residues comprising about 80 to 100 mole percent terephthalic acid residues and about 0 to 20 mole percent isophthalic acid residues; and
- (2) diol residues comprising about 55 to 80 mole percent 1,4-cyclohexanedimethanol residues and about 20 to about 45 mole percent ethylene glycol residues.

23. A polymer blend of Claim 14 wherein the polyester of component (A) has an inherent viscosity of about 0.4 to 0.8 dL/g measured at 25°C in a 60/40 ratio by weight of phenol/tetrachloroethane and comprises:

- (1) diacid residues comprising about 65 to 83 mole percent terephthalic acid residues and about 35 to 17 mole percent isophthalic acid residues; and
- (2) diol residues comprising about 80 to 100 mole percent 1,4-cyclohexanedimethanol residues and about 0 to about 20 mole percent ethylene glycol residues.

24. The polymer blend of Claim 23 wherein the polyester of component (A) comprises:

- (1) diacid residues comprising about 70 to 80 mole percent terephthalic acid residues and about 30 to 20 mole percent isophthalic acid residues; and
- (2) diol residues comprising about 90 to 100 mole percent 1,4-cyclohexanedimethanol residues and 0 to about 10 mole percent ethylene glycol residues.

25. The polymer blend of Claim 14 wherein the polyester of component (A) has an inherent viscosity of about 0.4 to 1.2 dL/g measured at 25°C in a 60/40 ratio by weight of phenol/tetrachloroethane and comprises:

- (1) diacid residues comprising at least about 80 mole percent 1,4-cyclohexanedicarboxylic acid residues; and

- (2) diol residues comprising at least about 80 mole percent 1,4-cyclohexanedimethanol residues.

26. The polymer blend of Claim 25 wherein the polyester of component (A) comprises:

- (1) diacid residues comprising about 90 to 100 mole percent 1,4-cyclohexanedicarboxylic acid residues;
- (2) diol residues comprising about 90 to 100 mole percent 1,4-cyclohexanedimethanol residues.

27. The polymer blend of Claim 26 wherein the polyester of component (A) comprises:

- (1) diacid residues comprising about 100 mole percent 1,4-cyclohexanedicarboxylic acid residues;
- (2) diol residues comprising about 100 mole percent 1,4-cyclohexanedimethanol residues.

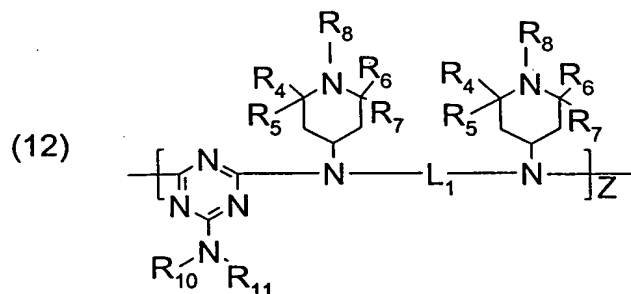
28. A polymer blend comprising a mixture of:

(A) at least one polyester having an inherent viscosity of about 0.4 to 1.2 dL/g measured at 25°C in a 60/40 ratio by weight of phenol/tetrachloroethane and comprises:

- (1) diacid residues comprising at least about 50 mole percent terephthalic acid residues, cyclohexanedicarboxylic acid residues or a mixture thereof; and
  - (2) diol residues comprising at least about 50 mole percent ethylene glycol, cyclohexanedimethanol residues, or a mixture thereof;
- wherein the total mole percentages of diacid residues is 100 mole percent and the total mole percentages of diol residues is 100 mole percent; and

(B) about 0.1 to 0.5 weight percent of at least one phosphite ester compound selected from the group of bis(2,4-di-t-butylphenyl)pentaerythritol diphosphite,

○



wherein R<sub>4</sub>= R<sub>5</sub>= R<sub>6</sub>= R<sub>7</sub>= R<sub>8</sub>=methyl, (R<sub>10</sub>)(R<sub>11</sub>)N- collectively represent morpholino, L<sub>1</sub> is C<sub>1</sub> to C<sub>6</sub> alkylene, and Z is 1 to 6.

29. The polymer blend of Claim 28 comprising from about 0.15 to 0.35 weight percent of the phosphite ester compounds and from 0.1 to about 0.75 weight percent of the hindered amine light stabilizer, based on the total weight of the polymer blend.

30. A polymer blend according to Claim 28 wherein the polyester of component (A) comprises:

- (1) diacid residues comprising about 80 to 100 mole percent terephthalic acid residues, about 0 to 20 mole percent isophthalic acid residues; and
- (2) diol residues comprising about 55 to 80 mole percent of 1,4-cyclohexanedimethanol residues and about 20 to 45 mole percent of ethylene glycol residues;

wherein the total of the diacid residues is equal to 100 mole percent and the total of the diol residues also is equal to 100 mole percent.

31. A polymer blend according to Claim 28 wherein the polyester of component (A) comprises:

- (1) diacid residues comprising about 70 to 80 mole percent terephthalic acid residues, about 30 to 20 mole percent isophthalic acid residues; and
- (2) diol residues comprising about 90 to 100 mole percent of 1,4-cyclohexanedimethanol residues and about 0 to 10 mole percent of ethylene glycol residues;

wherein the total of the diacid residues is equal to 100 mole percent and the total of the diol residues also is equal to 100 mole percent.

32. A polymer blend according to Claim 28 wherein the polyester of component (A) comprises:

- (1) diacid residues comprising at least about 90 mole percent 1,4-cyclohexanedicarboxylic acid residues; and
- (2) diol residues comprising at least about 90 mole percent 1,4-cyclohexanedimethanol residues;

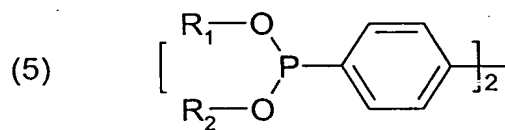
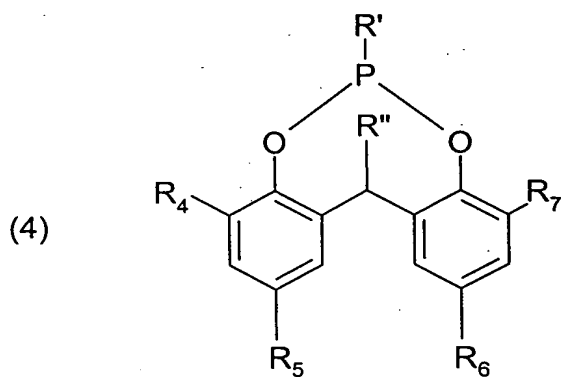
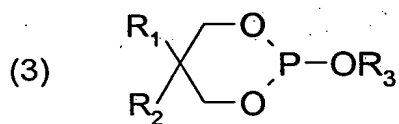
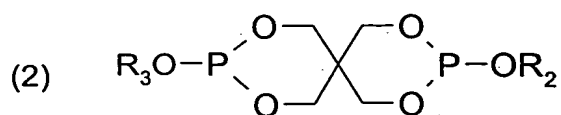
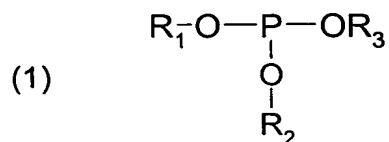
wherein the total of the diacid residues is equal to 100 mole percent and the total of the diol residues also is equal to 100 mole percent.

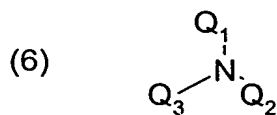
33. The polymer blend of Claim 28 wherein said phosphite ester compound is distearyl pentaerythritol diphosphite.

34. A polymer blend comprising a mixture of:

- (A) at least one polyester prepared by the reaction of at least one diol with at least one dicarboxylic acid or dialkyl ester thereof in the presence of a metallic catalyst;
- (B) at least one phosphite ester compound;
- (C) at least one hindered amine light stabilizer; and
- (D) at least one polycarbonate.

35. A polymer blend according to Claim 34 wherein the phosphite ester compound is selected from the formulas:





wherein

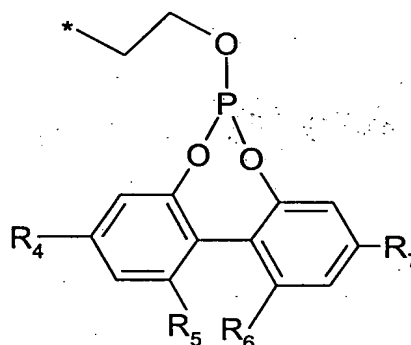
$R_1$ ,  $R_2$  and  $R_3$  are independently selected from  $C_1$ - $C_{22}$ -alkyl, substituted  $C_1$ - $C_{22}$ -alkyl,  $C_3$ - $C_8$ -cycloalkyl, substituted  $C_3$ - $C_8$ -cycloalkyl, heteroaryl, and aryl;

$R'$  is selected from halogen or  $OR_1$ ;

$R''$ ,  $R_4$ ,  $R_5$ ,  $R_6$ , and  $R_7$  are independently selected from hydrogen,  $C_1$ - $C_{22}$ -alkyl, substituted  $C_1$ - $C_{22}$ -alkyl,  $C_3$ - $C_8$ -cycloalkyl, substituted  $C_3$ - $C_8$ -cycloalkyl, heteroaryl, aryl;

each  $Q_1$ ,  $Q_2$  and  $Q_3$  group independently is radical A, wherein radical A has the following structure:

Radical A =

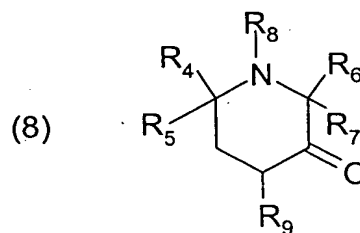
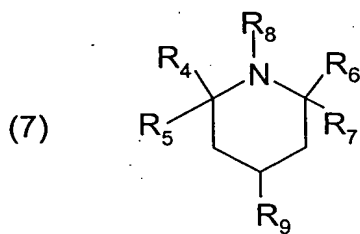


36. A polymer blend according to Claim 35 wherein the at least one polyester comprises:

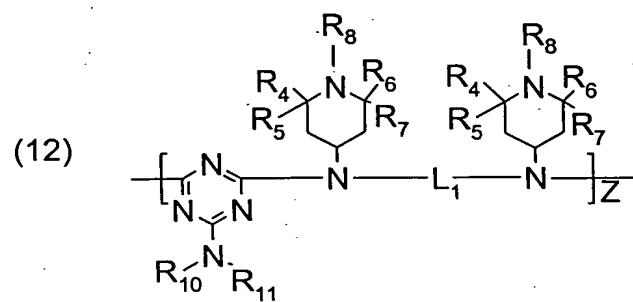
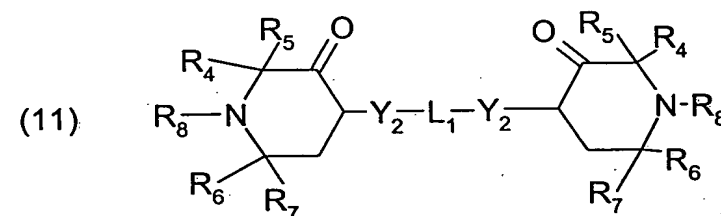
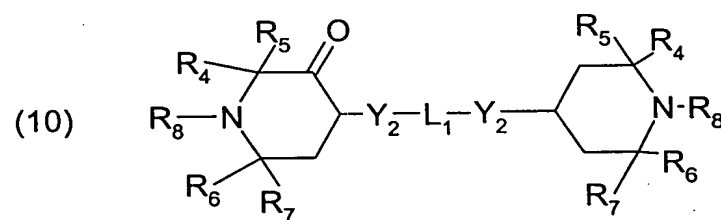
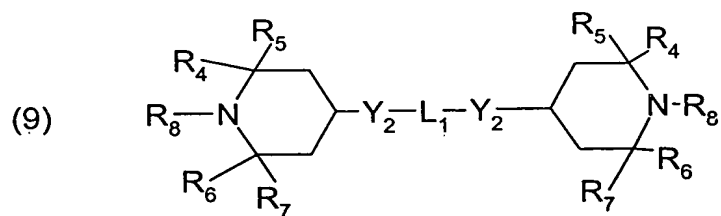
- (1) diacid residues comprising at least 50 mole percent terephthalic acid residues, cyclohexanedicarboxylic acid residues or a mixture thereof; and
- (2) diol residues comprising at least 50 mole percent of ethylene glycol residues, cyclohexanedimethanol residues, or a mixture thereof;

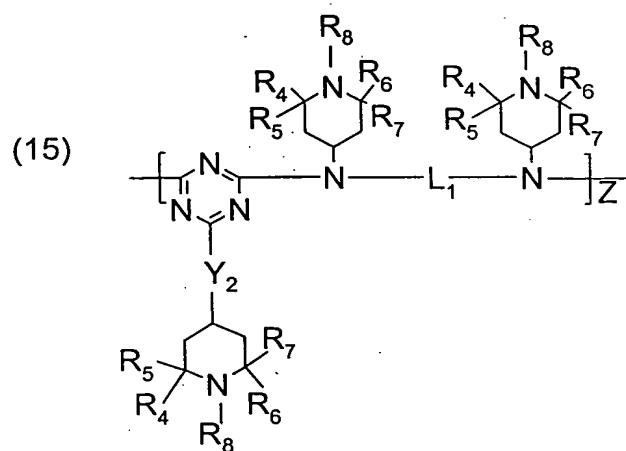
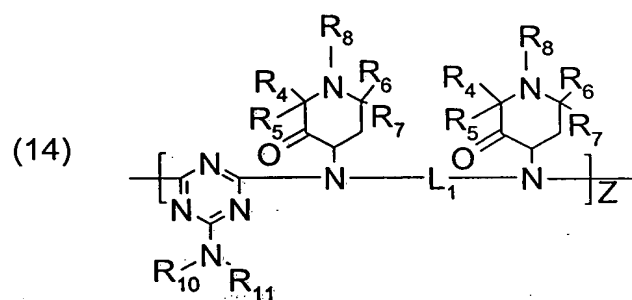
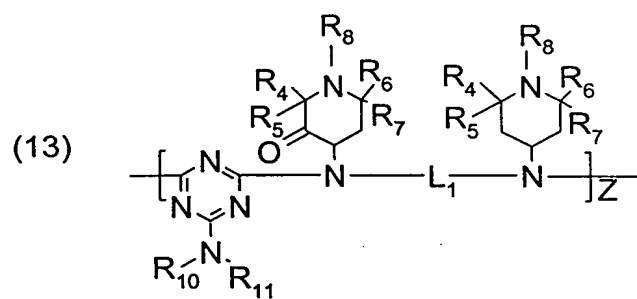
wherein the total of the diacid residues is equal to 100 mole percent and the total of the diol residues also is equal to 100 mole percent.

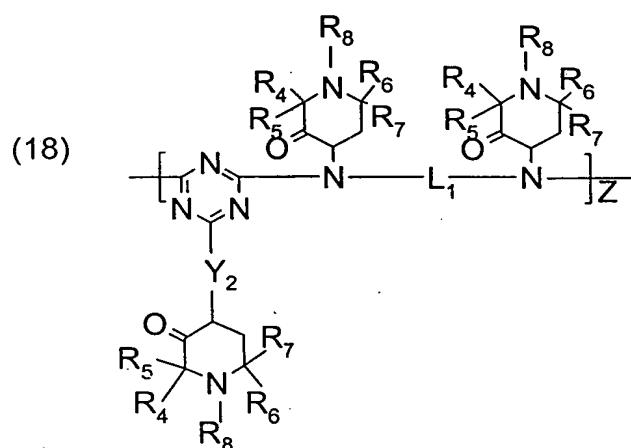
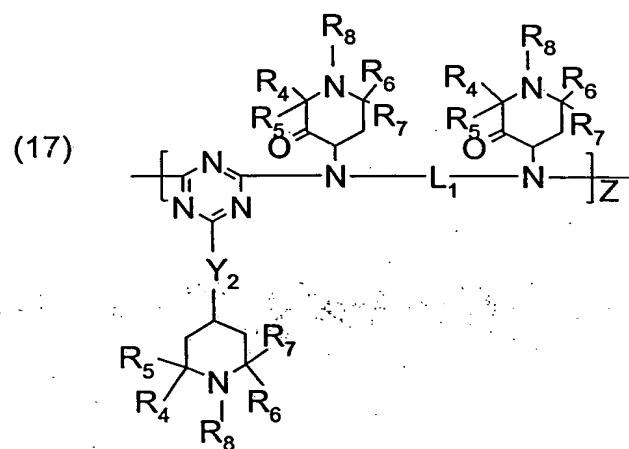
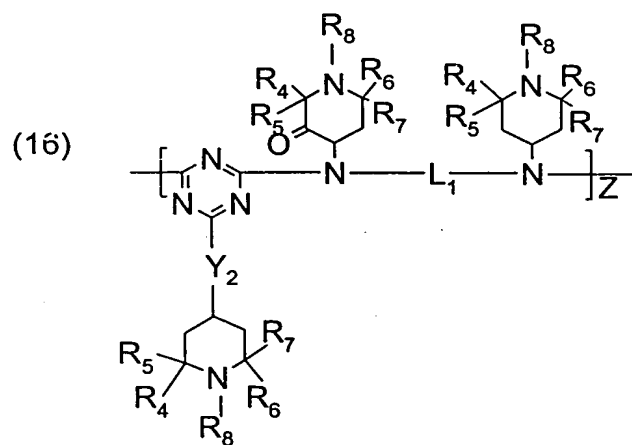
37. A polymer blend according to Claim 36 wherein the polyester comprises up to about 200 ppmw Ti, Co and/or Mn residues.
38. A polymer blend comprising:
- (A) at least one polyester comprising:
- (3) diacid residues comprising at least 50 mole percent terephthalic acid residues, cyclohexanedicarboxylic acid residues, or a mixture thereof residues; and
- (4) diol residues comprising at least 50 mole percent of ethylene glycol residues, cyclohexanedimethanol residues, or a mixture thereof;
- based on a total of 100 mole percent of diacid residues and a total of 100 mole percent of diol residues;
- (B) 0.01 to 0.5 weight percent of at least one phosphite ester compound based on the total weight of the blend;
- (C) 0.01 to 1.0 weight percent of at least one hindered amine light stabilizer based on the total weight of the blend, wherein the at least one hindered amine light stabilizer is selected from the following formulae:

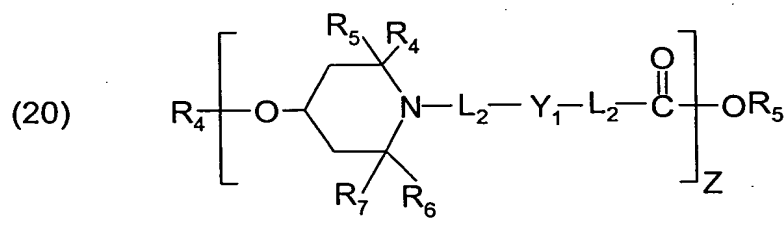
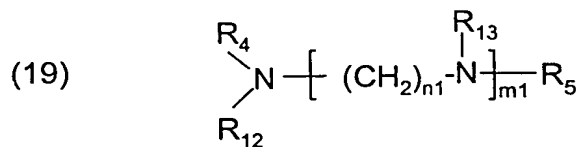










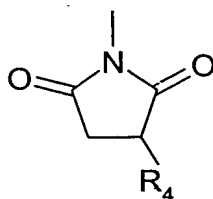


wherein

$R_4$ ,  $R_5$ ,  $R_6$ , and  $R_7$  are independently selected from hydrogen,  $C_1$ - $C_{22}$ -alkyl, substituted  $C_1$ - $C_{22}$ -alkyl,  $C_3$ - $C_8$ -cycloalkyl, substituted  $C_3$ - $C_8$ -cycloalkyl, heteroaryl, aryl;

$R_8$  is selected from hydrogen,  $-OR_6$ ,  $C_1$ - $C_{22}$ -alkyl, substituted  $C_1$ - $C_{22}$ -alkyl,  $C_3$ - $C_8$ -cycloalkyl, substituted  $C_3$ - $C_8$ -cycloalkyl;

$R_9$  is selected from hydrogen;  $C_1$ - $C_{22}$ -alkyl, substituted  $C_1$ - $C_{22}$ -alkyl,  $C_3$ - $C_8$ -cycloalkyl, substituted  $C_3$ - $C_8$ -cycloalkyl, heteroaryl, aryl,  $-Y_1-R_4$  or a succinimido group having the formula:



$R_{10}$  and  $R_{11}$  are independently selected from hydrogen,  $C_1$ - $C_{22}$ -alkyl, substituted  $C_1$ - $C_{22}$ -alkyl,  $C_3$ - $C_8$ -cycloalkyl, and substituted  $C_3$ - $C_8$ -cycloalkyl;

$R_{10}$  and  $R_{11}$  collectively may represent a divalent group forming a ring with the

nitrogen atom to which they are attached, e.g., morpholino, piperidino and the like;

$L_1$  is a divalent linking group selected from  $C_2$ - $C_{22}$ -alkylene;  $-(CH_2CH_2-Y_1)_{1-3}-CH_2CH_2-$ ;  $C_3$ - $C_8$ -cycloalkylene; arylene; or  $-CO-L_2-OC-$ ;

$L_2$  is selected from  $C_1$ - $C_{22}$ -alkylene, arylene,  $-(CH_2CH_2-Y_1)_{1-3}-CH_2CH_2-$  and  $C_3$ - $C_8$ -cycloalkylene;

$Y_1$  is selected from  $-OC(O)-$ ,  $-NHC(O)-$ ,  $-O-$ ,  $-S-$ ,  $-N(R_4)-$ ;

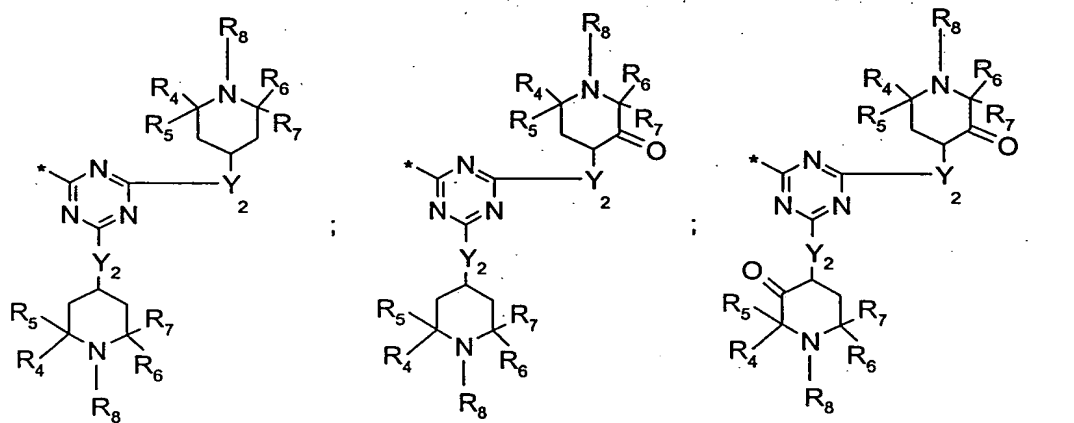
$Y_2$  is selected from  $-O-$  or  $-N(R_4)-$ ;

$Z$  is a positive integer of up to about 20, preferably up to about 6;

$m_1$  is selected from 0 to about 10;

$n_1$  is a positive integer selected from 2 to about 12;

$R_{12}$ , and  $R_{13}$  are independently selected from hydrogen,  $C_1$ - $C_{22}$ -alkyl, substituted  $C_1$ - $C_{22}$ -alkyl, heteroaryl, aryl and radical B wherein radical B is selected from the following structures:



Radical B structures wherein \* designate the position of attachment

wherein at least one of  $R_{12}$  and  $R_{13}$  is radical B; and

(D) at least one polycarbonate.

39. The polymer blend of Claim 38 wherein  $R_8$  of the formula for the at least one hindered amine light stabilizer is hydrogen or alkyl.

40. The polymer blend of Claim 38 wherein the polyester of component (A) has an inherent viscosity of about 0.4 to 1.2 dL/g measured at 25°C in a 60/40 ratio by weight of phenol/tetrachloroethane and comprises:

- (1) diacid residues comprising about 80 to 100 mole percent terephthalic acid residues and about 0 to 20 mole percent isophthalic acid residues; and
- (2) diol residues comprising about 40 to 100 mole percent 1,4-cyclohexanedimethanol residues and 0 to about 60 mole percent ethylene glycol residues and component (B) 0.05 to 0.5 weight percent of at least one phosphite ester compound and C) comprises 0.05 to 1.0 weight percent of at least one hindered amine light stabilizer based on the total weight of the composition.

41. The polymer blend of Claim 40 wherein the polyester of component (A) has an inherent viscosity of about 0.4 to 0.8 dL/g measured at 25°C in a 60/40 ratio by weight of phenol/tetrachloroethane and comprises:

- (1) diacid residues comprising about 80 to 100 mole percent terephthalic acid residues and about 0 to 20 mole percent isophthalic acid residues; and
- (2) diol residues comprising about 55 to 80 mole percent 1,4-cyclohexanedimethanol residues and about 20 to about 45 mole percent ethylene glycol residues.

42. A polymer blend of Claim 38 wherein the polyester of component (A) has an inherent viscosity of about 0.4 to 0.8 dL/g measured at 25°C in a 60/40 ratio by weight of phenol/tetrachloroethane and comprises:

- (1) diacid residues comprising about 65 to 83 mole percent terephthalic acid residues and about 35 to 17 mole percent isophthalic acid residues; and
- (2) diol residues comprising about 80 to 100 mole percent 1,4-cyclohexanedimethanol residues and about 0 to about 20 mole percent ethylene glycol residues.

43. The polymer blend of Claim 42 wherein the polyester of component (A) comprises:

- (1) diacid residues comprising about 70 to 80 mole percent terephthalic acid residues and about 30 to 20 mole percent isophthalic acid residues; and
- (2) diol residues comprising about 90 to 100 mole percent 1,4-cyclohexanedimethanol residues and 0 to about 10 mole percent ethylene glycol residues.

44. The polymer blend of Claim 38 wherein the polyester of component (A) has an inherent viscosity of about 0.4 to 1.2 dL/g measured at 25°C in a 60/40 ratio by weight of phenol/tetrachloroethane and comprises:

- (1) diacid residues comprising at least about 80 mole percent 1,4-cyclohexanedicarboxylic acid residues; and
- (2) diol residues comprising at least about 80 mole percent 1,4-cyclohexanedimethanol residues.

45. The polymer blend of Claim 44 wherein the polyester of component (A) comprises:

- (1) diacid residues comprising about 90 to 100 mole percent 1,4-cyclohexanedicarboxylic acid residues;
- (2) diol residues comprising about 90 to 100 mole percent 1,4-cyclohexanedimethanol residues.

46. The polymer blend of Claim 45 wherein the polyester of component (A) comprises:

- (1) diacid residues comprising about 100 mole percent 1,4-cyclohexanedicarboxylic acid residues;
- (2) diol residues comprising about 100 mole percent 1,4-cyclohexanedimethanol residues.

47. The polymer blend of Claim 34 wherein the polycarbonate is derived from bisphenol A.

48. A polymer blend comprising a mixture of the following:

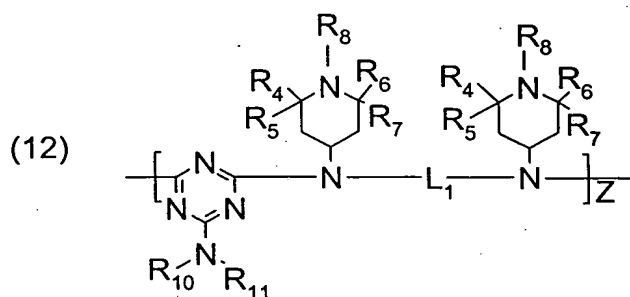
(A) at least one polyester having an inherent viscosity of about 0.4 to 1.2 dL/g measured at 25°C in a 60/40 ratio by weight of phenol/tetrachloroethane and comprises:

(1) diacid residues comprising at least about 50 mole percent of a residue of a diacid selected from 1,4-cyclohexanedicarboxylic acid, terephthalic acid and isophthalic acid or a mixture thereof; and

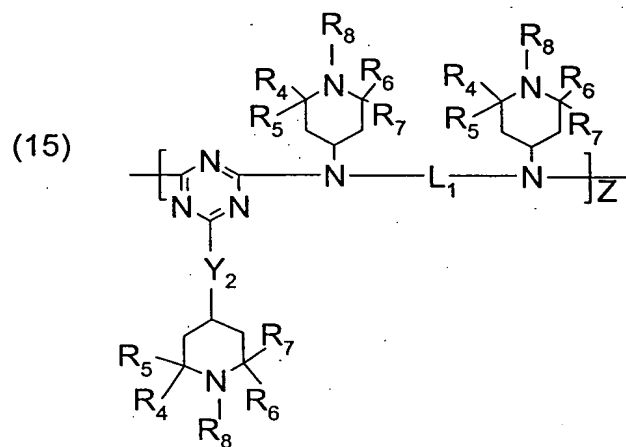
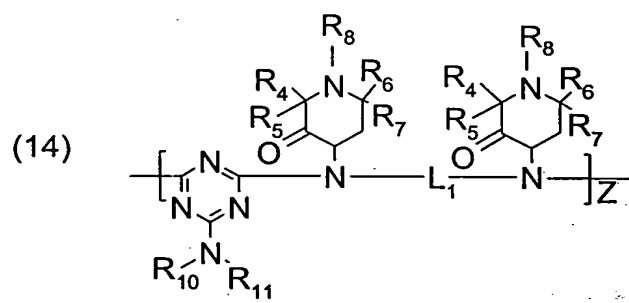
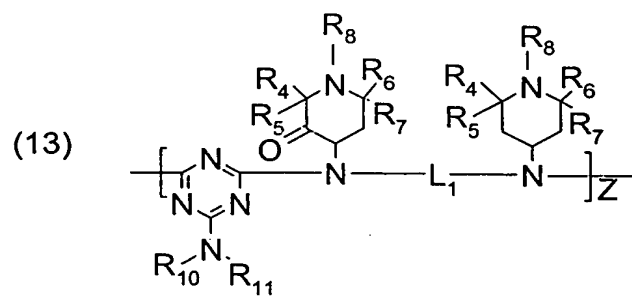
(2) diol residues comprising at least about 50 mole percent ethylene glycol, cyclohexanedimethanol residues, or a mixture thereof;

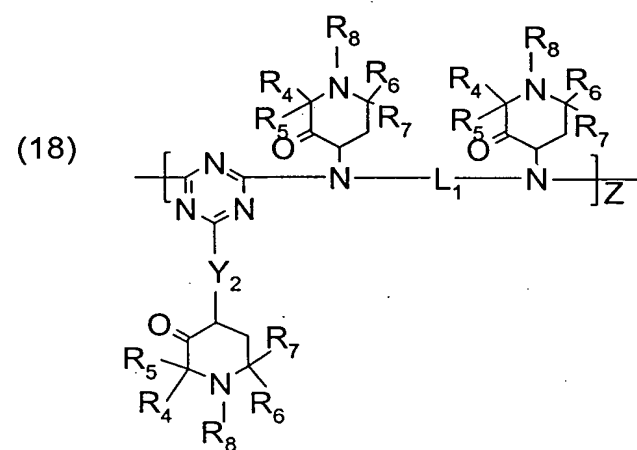
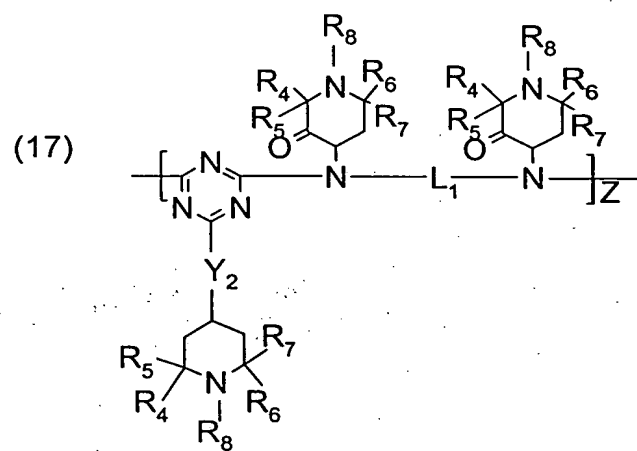
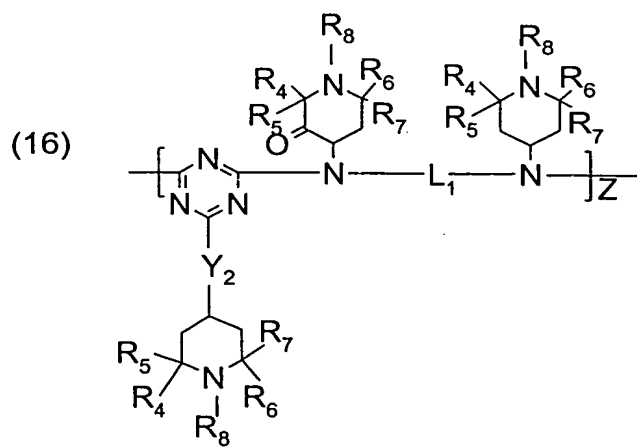
(B) about 0.1 to 0.5 weight percent of at least one phosphite ester compound selected from the group of phosphites, based on the total weight of the composition;

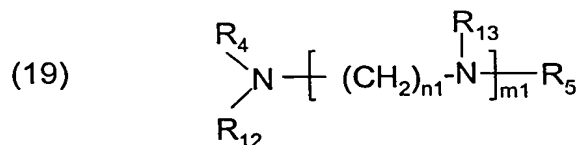
(C) about 0.1 to 1.0 weight percent of at least one hindered amine light stabilizer based on the total weight of the composition having the formulas:











wherein

$R_4$ ,  $R_5$ ,  $R_6$ , and  $R_7$  are independently selected from hydrogen,  $C_1$ - $C_{22}$ -alkyl, substituted  $C_1$ - $C_{22}$ -alkyl,  $C_3$ - $C_8$ -cycloalkyl, substituted  $C_3$ - $C_8$ -cycloalkyl, heteroaryl, aryl;

$R_8$  is selected from hydrogen,  $-OR_6$ ,  $C_1$ - $C_{22}$ -alkyl, substituted  $C_1$ - $C_{22}$ -alkyl,  $C_3$ - $C_8$ -cycloalkyl, substituted  $C_3$ - $C_8$ -cycloalkyl;

$R_{10}$  and  $R_{11}$  are independently selected from hydrogen,  $C_1$ - $C_{22}$ -alkyl, substituted  $C_1$ - $C_{22}$ -alkyl,  $C_3$ - $C_8$ -cycloalkyl, and substituted  $C_3$ - $C_8$ -cycloalkyl;

$R_{10}$  and  $R_{11}$  collectively may represent a divalent group forming a ring with the nitrogen atom to which they are attached;

$L_1$  is a divalent linking group selected from  $C_2$ - $C_{22}$ -alkylene;  $-(CH_2CH_2-Y_1)_{1-3}-CH_2CH_2-$ ;  $C_3$ - $C_8$ -cycloalkylene; arylene; or  $-CO-L_2-OC-$ ;

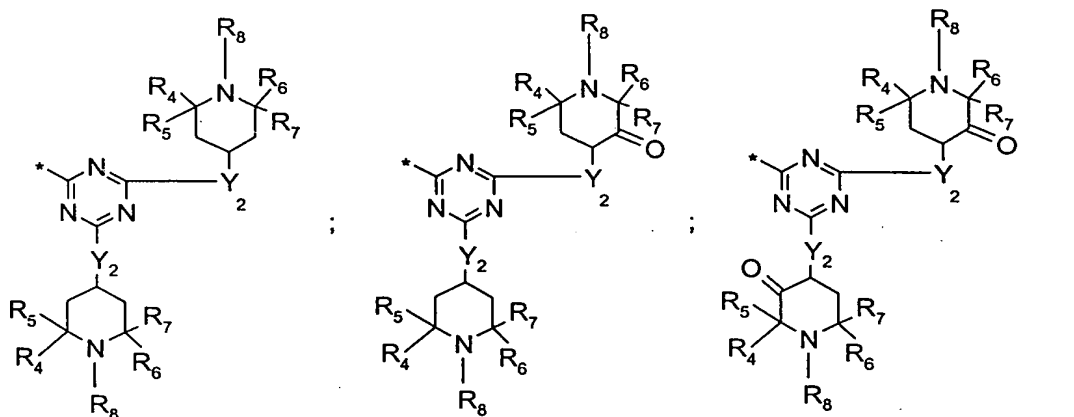
$Y_2$  is selected from  $-O-$  or  $-N(R_4)-$ ;

$Z$  is a positive integer of up to about 20, preferably up to about 6;

$m1$  is selected from 0 to about 10;

$n1$  is a positive integer selected from 2 to about 12;

$R_{12}$ , and  $R_{13}$  are independently selected from hydrogen,  $C_1$ - $C_{22}$ -alkyl, substituted  $C_1$ - $C_{22}$ -alkyl, heteroaryl, aryl and radical B wherein radical B is selected from the following structures:



Radical B structures wherein \* designate the position of attachment.

wherein at least one of  $R_{12}$  and  $R_{13}$  is radical B; and

(D) at least one polycarbonate.

49. The polymer blend of Claim 48 wherein  $R_8$  is hydrogen or alkyl for the hindered amine light stabilizer.

50. The polymer blend of Claim 48 wherein the at least one hindered amine light stabilizer contains an  $sp^3$ -hybridized nitrogen atom that is not contained within the substituted piperidine ring.

51. The polymer blend of Claim 48 wherein the at least one hindered amine light stabilizer has a weight average molecular weight of greater than 1000.

52. The polymer blend of Claim 48 wherein the phosphite is selected from the group consisting of bis(2,4-di-*t*-butylphenyl)pentaerythritol diphosphite, distearyl pentaerythritol diphosphite, and bis-(2,4-dicumylphenyl) pentaerythritol diphosphite.

53. The polymer blend of Claim 52 wherein said phosphite ester compound is distearyl pentaerythritol diphosphite.

54. The polymer blend of Claim 48 comprising from about 0.15 to 0.35 weight percent of the phosphite ester compounds and from 0.1 to about 0.75 weight percent of the hindered amine light stabilizer, based on the total weight of the polymer blend.

55. The polymer blend of Claim 48 wherein the polyester of component (A) has an inherent viscosity of about 0.4 to 0.8 dL/g measured at 25°C in a 60/40 ratio by weight of phenol/tetrachloroethane and comprises:

- (1) diacid residues comprising about 80 to 100 mole percent terephthalic acid residues and about 0 to 20 mole percent isophthalic acid residues; and
- (2) diol residues comprising about 40 to 100 mole percent 1,4-cyclohexanedimethanol residues and about 0 to about 60 mole percent ethylene glycol residues.

56. The polymer blend of Claim 48 wherein the polyester of component (A) has an inherent viscosity of about 0.4 to 0.8 dL/g measured at 25°C in a 60/40 ratio by weight of phenol/tetrachloroethane and comprises:

- (1) diacid residues comprising about 80 to 100 mole percent terephthalic acid residues and about 0 to 20 mole percent isophthalic acid residues; and
- (2) diol residues comprising about 55 to 80 mole percent 1,4-cyclohexanedimethanol residues and about 20 to about 45 mole percent ethylene glycol residues.

57. A polymer blend of Claim 48 wherein the polyester of component (A) has an inherent viscosity of about 0.4 to 0.8 dL/g measured at 25°C in a 60/40 ratio by weight of phenol/tetrachloroethane and comprises:

- (1) diacid residues comprising about 65 to 83 mole percent terephthalic acid residues and about 35 to 17 mole percent isophthalic acid residues; and

- (2) diol residues comprising about 80 to 100 mole percent 1,4-cyclohexanedimethanol residues and about 0 to about 20 mole percent ethylene glycol residues.

58. The polymer blend of Claim 57 wherein the polyester of component (A) comprises:

- (1) diacid residues comprising about 70 to 80 mole percent terephthalic acid residues and about 30 to 20 mole percent isophthalic acid residues; and
- (2) diol residues comprising about 90 to 100 mole percent 1,4-cyclohexanedimethanol residues and 0 to about 10 mole percent ethylene glycol residues.

59. The polymer blend of Claim 48 wherein the polyester of component (A) has an inherent viscosity of about 0.4 to 1.2 dL/g measured at 25°C in a 60/40 ratio by weight of phenol/tetrachloroethane and comprises:

- (1) diacid residues comprising at least about 80 mole percent 1,4-cyclohexanedicarboxylic acid residues; and
- (2) diol residues comprising at least about 80 mole percent 1,4-cyclohexanedimethanol residues.

60. The polymer blend of Claim 59 wherein the polyester of component (A) comprises:

- (1) diacid residues comprising about 90 to 100 mole percent 1,4-cyclohexanedicarboxylic acid residues;
- (2) diol residues comprising about 90 to 100 mole percent 1,4-cyclohexanedimethanol residues.

61. The polymer blend of Claim 60 wherein the polyester of component (A) comprises:

- (1) diacid residues comprising about 100 mole percent 1,4-cyclohexanedicarboxylic acid residues;

(2) diol residues comprising about 100 mole percent 1,4-cyclohexanedimethanol residues.

62. A polymer blend comprising a mixture of:

(A) at least one polyester having an inherent viscosity of about 0.4 to 1.2 dL/g measured at 25°C in a 60/40 ratio by weight of phenol/tetrachloroethane and comprises:

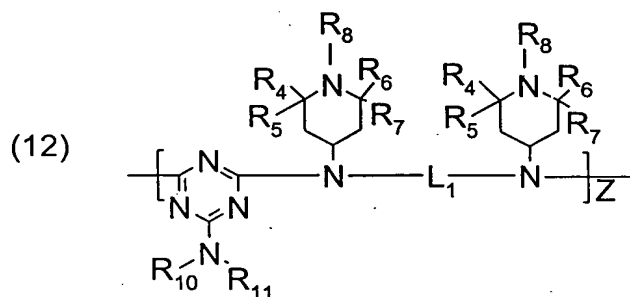
(1) diacid residues comprising at least about 50 mole percent of a residue of a diacid selected from 1,4-cyclohexanedicarboxylic acid, terephthalic acid and isophthalic acid or a mixture thereof; and

(2) diol residues comprising at least about 50 mole percent ethylene glycol, cyclohexanedimethanol residues, or a mixture thereof;

wherein the total mole percentages of diacid residues is 100 mole percent and the total mole percentages of diol residues is 100 mole percent; and

(B) about 0.1 to 0.5 weight percent of at least one phosphite ester compound selected from the group of bis(2,4-di-t-butylphenyl)pentaerythritol diphosphite, distearyl pentaerythritol diphosphite, and bis-(2,4-dicumylphenyl) pentaerythritol diphosphite, based on the total weight of the blend; and

(C) about 0.1 to 1.0 weight percent of at least one hindered amine light stabilizer based on the total weight of the composition having the formula:



wherein  $R_4 = R_5 = R_6 = R_7 = R_8 = \text{methyl}$ ,  $(R_{10})(R_{11})N$ - collectively represent morpholino,

$L_1$  is  $C_1$  to  $C_6$  alkylene, and  $Z$  is 1 to 6; and

(D) at least one polycarbonate.

63. The polymer blend of Claim 62 comprising from about 0.15 to 0.35 weight percent of the phosphite ester compound and from 0.1 to about 0.75 weight percent of the hindered amine light stabilizer, based on the total weight of the polymer blend.

64. A polymer blend according to Claim 62 wherein the polyester of component (A) comprises:

- (1) diacid residues comprising about 80 to 100 mole percent terephthalic acid residues, about 0 to 20 mole percent isophthalic acid residues; and
- (2) diol residues comprising about 55 to 80 mole percent of 1,4-cyclohexanedimethanol residues and about 20 to 45 mole percent of ethylene glycol residues;

wherein the total of the diacid residues is equal to 100 mole percent and the total of the diol residues also is equal to 100 mole percent.

65. A polymer blend according to Claim 62 wherein the polyester of component (A) comprises:

- (1) diacid residues comprising about 70 to 80 mole percent terephthalic acid residues, about 30 to 20 mole percent isophthalic acid residues; and
- (2) diol residues comprising about 90 to 100 mole percent of 1,4-cyclohexanedimethanol residues and about 0 to 10 mole percent of ethylene glycol residues;

wherein the total of the diacid residues is equal to 100 mole percent and the total of the diol residues also is equal to 100 mole percent.

66. A polymer blend according to Claim 62 wherein the polyester of component (A) comprises:

- (1) diacid residues comprising at least about 90 mole percent 1,4-cyclohexanedicarboxylic acid residues; and



(2) diol residues comprising at least about 90 mole percent 1,4-cyclohexanedimethanol residues;

wherein the total of the diacid residues is equal to 100 mole percent and the total of the diol residues also is equal to 100 mole percent.

67. The polymer blend of Claim 62 wherein said phosphite ester compound is distearyl pentaerythritol diphosphite